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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XG627

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Aldo's Seawall Replacement Project in Santa Cruz, California

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; Issuance of an Incidental Harassment Authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an incidental harassment authorization (IHA) to the Santa Cruz Port District (Port District) to incidentally harass, by Level A and Level B harassment only, marine mammals during pile driving activities associated with the Aldo's Seawall Replacement Project in Santa Cruz, California (CA).

DATES: This Authorization is effective from June 1, 2019 through May 31, 2020.

FOR FURTHER INFORMATION CONTACT: Amy Fowler, Office of Protected Resources, NMFS, (301) 427-8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities*. In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the "take" of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq*.) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed incidental take authorization may be provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other "means of effecting the least practicable [adverse] impact" on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stocks for taking for certain subsistence uses (referred to in shorthand as "mitigation"); and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

Summary of Request

On August 27, 2018, NMFS received a request from the Port District for an IHA to take marine mammals incidental to the Aldo's Seawall Replacement Project in the Santa Cruz Small Craft Harbor (harbor). The application was deemed adequate and complete on March 21, 2019. The Port District's request was for take of four species of marine mammals by Level B harassment and Level A harassment. Neither the Port District nor NMFS expect serious injury or mortality to result from this activity and therefore, an IHA is appropriate.

Description of Activity

The Port District is planning to replace the existing seawall located below Aldo's Restaurant along the southwest bank of the Santa Cruz Small Craft Harbor. The project involves demolishing the existing restaurant structure and timber pile supported restaurant deck, modifying a dock gangway landing, removing timber piles supporting the public wharf, removing and reinstalling rip-rap to accept the new sheet pile wall, predrilling for new sheet piles, and installing a new steel sheet pile seawall with concrete pile cap and tie-backs in front of the existing seawall. Four 16-inch (in) (40.6 centimeter (cm)) timber piles supporting the public wharf will be permanently removed using a vibratory hammer. Ninety steel sheet piles will be installed using vibratory and impact hammers. Sounds produced by these activities may result in take, by Level A and Level B harassment, of marine mammals within and outside of the harbor.

In-water work associated with the project is expected to occur on 28 non-consecutive days between June 15, 2019 and November 1, 2019. Work will be limited to daylight hours only, and timed to occur at low tide, as feasible.

A detailed description of the planned activities is provided in the **Federal Register** notice announcing the proposed IHA (84 FR 13892; April 8, 2019). Since that time, no changes have been made to the Port District's planned activities. Therefore, a detailed description is not provided here. Please refer to that **Federal Register** notice for the description of the specific activity.

Comments and Responses

A notice of NMFS' proposal to issue an IHA to the Port District was published in the **Federal Register** on April 8, 2019 (84 FR 13892). That notice described, in detail, the Port District's activity, the marine mammal species that may be affected by the activity, the

anticipated effects on marine mammals and their habitat, proposed amount and manner of take, and proposed mitigation, monitoring and reporting measures. On May 6, 2019, NMFS received a comment letter from the Marine Mammal Commission (Commission); the Commission's recommendations and our responses are provided here, and the comments have been posted online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities*. The Commission recommended that NMFS issue the IHA, subject to inclusion of the proposed mitigation, monitoring, and reporting measures.

Comment 1: The Commission questioned whether the public notice provisions for IHA Renewals fully satisfy the public notice and comment provision in the MMPA and discussed the potential burden on reviewers of reviewing key documents and developing comments quickly. Therefore, the Commission recommended that NMFS use the IHA Renewal process sparingly and selectively for activities expected to have the lowest levels of impacts to marine mammals and that require less complex analysis.

Response: NMFS has taken a number of steps to ensure the public has adequate notice, time, and information to be able to comment effectively on IHA Renewals within the limitations of processing IHA applications efficiently. The **Federal Register** notice for the initial proposed IHA (84 FR 13892; April 8, 2019) had previously identified the conditions under which a one-year Renewal IHA might be appropriate. This information is presented in the Request for Public Comments section of the initial proposed IHA and thus encourages submission of comments on the potential of a one-year renewal as well as the initial IHA during the 30-day comment period. In addition, when we receive an application for a Renewal IHA, we publish a notice of the proposed IHA Renewal in the **Federal Registe**r and provide an additional 15 days for public comment, for a total of 45 days of public comment. We will also directly contact all commenters

on the initial IHA by email, phone, or, if the commenter did not provide email or phone information, by postal service to provide them the opportunity to submit any additional comments on the proposed Renewal IHA.

NMFS also strives to ensure the public has access to key information needed to submit comments on a proposed IHA, whether an initial IHA or a Renewal IHA. The agency's website includes information for all projects under consideration, including the application, references, and other supporting documents. Each **Federal Register** notice also includes contact information in the event a commenter has questions or cannot find the information they seek.

Regarding the Commission's comment that Renewal IHAs should be limited to certain types of projects, NMFS has explained on its website and in individual **Federal Register** notices that Renewal IHAs are appropriate where the continuing activities are identical, nearly identical, or a subset of the activities for which the initial 30-day comment period applied. Where the commenter has likely already reviewed and commented on the initial proposed IHA for these activities, the abbreviated additional comment period is sufficient for consideration of the results of the preliminary monitoring report and new information (if any) from the past year.

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the IHA application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS's Stock Assessment Reports (SAR; *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and more general information about these species (*e.g.*, physical and behavioral descriptions) may be found on NMFS's website (*https://www.fisheries.noaa.gov/find-species*).

Table 1 lists all species with expected potential for occurrence in the harbor and surrounding waters of Monterey Bay and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2018). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS's stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS's U.S. Pacific SARs. All values presented in Table 1 are the most recent available at the time of publication and are available in the 2017 SARs (Caretta *et al.*, 2018) and draft 2018 SARs (available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/draft-marine-mammal-stock-assessment-reports*).

Table 1. Marine Mammals with Potential Presence within the Project Area.

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N)[1]	Stock abundance (CV, N_{min}, most recent abundance survey)[2]	PBR	Annual M/SI[3]
Order Cetartiodactyla – Cetacea – Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						

Family Delphinidae						
Common bottlenose dolphin	*Tursiops truncatus*	California Coastal	- / -; N	453 (0.06, 346, 2011)	2.7	> 2.0
Family Phocoenidae (porpoises)						
Harbor porpoise	*Phocoena phocoena*	Monterey Bay	- / -; N	3,715 (0.51, 2,480, 2011)	25	0
Order Carnivora – Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions)						
California sea lion	*Zalophus californianus*	U.S.	- / -; N	257,606 (N/A, 233,515, 2014)	14,011	> 319
Family Phocidae (earless seals)						
Harbor seal	*Phoca vitulina*	California	- / -; N	30,968 (N/A, 27,348, 2012)	1,641	43

1 - Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.
2 - NMFS marine mammal stock assessment reports online at: https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments. CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.
3 - These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.*, commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

A detailed description of the species likely to be affected by the project, including brief introductions to the species and relevant stocks as well as available information regarding population trends and threats, and information regarding local occurrence, were provided in the **Federal Register** notice for the proposed IHA (84 FR 13892; April 8, 2019); since that time, we are not aware of any changes in the status of these species and stocks; therefore, detailed descriptions are not provided here. Please refer to that **Federal Register** notice for these descriptions. Please also refer to NMFS' website (https://www.fisheries.noaa.gov/find-species) for generalized species accounts.

Potential Effects of Specified Activities on Marine Mammals and their Habitat

The effects of underwater noise from the Port District's activities for the Aldo's Seawall Replacement Project have the potential to result in behavioral harassment of marine mammals in the vicinity of the action area. The **Federal Register** notice for the proposed IHA (84 FR 13892; April 8, 2019) included a discussion of the effects of anthropogenic noise on marine mammals, therefore that information is not repeated here; please refer to the **Federal Register** notice (84 FR 13892; April 8, 2019) for that information.

Estimated Take

This section provides an estimate of the number of incidental takes authorized through this IHA, which will inform both NMFS' consideration of "small numbers" and the negligible impact determination.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes will primarily be by Level B harassment, as use of the vibratory and impact pile hammers has the potential to result in disruption of behavioral patterns for individual marine mammals. There is also some potential for auditory injury (Level A harassment) to result, primarily for high frequency cetaceans, phocids, and otariids, because predicted auditory injury zones are larger than for mid-frequency species. However, due to the shape of the harbor and the

small overall ensonified area (see Figure 3 in IHA application), auditory injury in high frequency cetaceans is not expected nor authorized. Auditory injury may occur in phocids and otariids within the inner harbor area during impact pile driving. The mitigation and monitoring measures are expected to minimize the severity of such taking to the extent practicable.

As described previously, no mortality is anticipated or authorized for this activity. Below we describe how the take is estimated.

Generally speaking, we estimate take by considering: (1) acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) and the number of days of activities. We note that while these basic factors can contribute to a basic calculation to provide an initial prediction of takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.*, previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the take estimate.

Acoustic Thresholds

Using the best available science, NMFS has developed acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur a permanent threshold shift (PTS) of some degree (equated to Level A harassment).

Level B Harassment for non-explosive sources – Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source (*e.g.*, frequency, predictability, duty cycle),

the environment (*e.g.*, bathymetry), and the receiving animals (hearing, motivation, experience, demography, behavioral context) and can be difficult to predict (Southall *et al.*, 2007, Ellison *et al.*, 2012). Based on what the available science indicates and the practical need to use a threshold based on a factor that is both predictable and measurable for most activities, NMFS uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS predicts that marine mammals are likely to be behaviorally harassed in a manner we consider Level B harassment when exposed to underwater anthropogenic noise above received levels of 120 decibels (dB) re 1 microPascal (µPa) (root mean square (rms)) for continuous (*e.g.*, vibratory pile-driving, drilling) and above 160 dB re 1 µPa (rms) for non-explosive intermittent (*e.g.*, impact pile driving) sources. The Port District's activity includes the use of continuous (vibratory pile driving and removal) and impulsive (impact pile driving) sources, and therefore the 120 and 160 dB re 1 µPa (rms) thresholds are applicable.

Level A harassment for non-explosive sources - NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). The Port District's activity includes the use of impulsive (impact pile driving) and non-impulsive (vibratory pile driving and removal) sources.

These thresholds are provided in the table below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS 2018 Technical Guidance, which may be accessed at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance*.

Table 2. Thresholds identifying the onset of Permanent Threshold Shift.

	PTS Onset Acoustic Thresholds* (Received Level)	
Hearing Group	**Impulsive**	**Non-impulsive**
Low-Frequency (LF) Cetaceans	*Cell 1* $L_{pk,flat}$: 219 dB $L_{E,LF,24h}$: 183 dB	*Cell 2* $L_{E,LF,24h}$: 199 dB
Mid-Frequency (MF) Cetaceans	*Cell 3* $L_{pk,flat}$: 230 dB $L_{E,MF,24h}$: 185 dB	*Cell 4* $L_{E,MF,24h}$: 198 dB
High-Frequency (HF) Cetaceans	*Cell 5* $L_{pk,flat}$: 202 dB $L_{E,HF,24h}$: 155 dB	*Cell 6* $L_{E,HF,24h}$: 173 dB
Phocid Pinnipeds (PW) (Underwater)	*Cell 7* $L_{pk,flat}$: 218 dB $L_{E,PW,24h}$: 185 dB	*Cell 8* $L_{E,PW,24h}$: 201 dB
Otariid Pinnipeds (OW) (Underwater)	*Cell 9* $L_{pk,flat}$: 232 dB $L_{E,OW,24h}$: 203 dB	*Cell 10* $L_{E,OW,24h}$: 219 dB

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 µPa, and cumulative sound exposure level (L_E) has a reference value of 1µPa²s. In this Table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (i.e., varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that will feed into identifying the area ensonified above the acoustic thresholds, which include source levels and transmission loss coefficient.

The sound field in the project area is the existing background noise plus additional construction noise from the project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.*, impact pile driving, vibratory pile driving and removal). The entire lower harbor (see Figure 2a in the IHA application) and a small, narrow band extending southeast from the mouth of the harbor into Monterey Bay (see Figure 3 in the IHA application) may be ensonified by project activities. Vessel traffic within the harbor and out in Monterey Bay may contribute to elevated background noise levels which may mask sounds produced by the project.

The distances to the Level A and Level B harassment thresholds were calculated based on source levels from similar pile driving activities in California and Washington. The Port District utilized in-water measurements generated by the Greenbusch Group (2018) from the Seattle Pier 62 project (83 FR 39709) to establish proxy sound source levels for vibratory removal of the 16-inch timber piles. The results determined unweighted rms ranging from 140 dB to 169 dB. NMFS analyzed source measurements at different distances for all 63 individual timber piles that were removed at Pier 62 and normalized the values to 10 meters (m). The results showed that the median is 152 dB SPLrms. This value was used as the source level for vibratory removal of 16-inch timber piles (Table 3). For vibratory and impact installation of steel sheet piles, the Port District utilized reference source levels of vibratory and impact driving of 24-inch (0.6 m) steel sheet piles from CalTrans *Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish* (Buehler *et al.*, 2015). Vibratory driving of 24-inch (0.6 m) AZ steel sheet piles was found to have a range of source levels between 160 and 165 dB (rms) at 10 m, but the typical source level was 160 dB rms (Table 3). The project

involves slightly smaller 0.5 m steel sheet piles, but the CalTrans source levels are the best available proxy.

Table 3. Source Levels for Pile Driving Activities.

Activity	SPL_{PK} (dB)	SPL_{RMS} (dB)	SEL (dB)	Source
Vibratory timber pile removal	n/a	152	n/a	Greenbusch Group 2018
Vibratory sheet pile installation	175	160	160	Buehler *et al.*, 2015
Impact sheet pile installation	205	190	180	Buehler *et al.*, 2015

Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater TL is:

$TL = B * Log_{10} (R_1/R_2)$, where

TL = transmission loss in dB

B = transmission loss coefficient; for practical spreading equals 15

R_1 = the distance of the modeled SPL from the driven pile, and

R_2 = the distance from the driven pile of the initial measurement

A practical spreading value of fifteen is often used under conditions, such as at the harbor, where water increases with depth as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading loss is assumed here.

Using the practical spreading loss model, the Port District determined the distance where the noise will fall below the behavioral effects threshold for both continuous (vibratory pile

driving and removal) and intermittent (impact pile driving) sources (120 and 160 dB dB re 1 µPa (rms), respectively). These distances are shown in Table 5 below.

When the NMFS Technical Guidance (2016) was published, in recognition of the fact that ensonified area/volume could be more technically challenging to predict because of the duration component in the new thresholds, we developed a User Spreadsheet that includes tools to help predict a simple isopleth that can be used in conjunction with marine mammal density or occurrence to help predict takes. We note that because of some of the assumptions included in the methods used for these tools, we anticipate that isopleths produced are typically going to be overestimates of some degree, which may result in some degree of overestimate of Level A harassment take. However, these tools offer the best way to predict appropriate isopleths when more sophisticated 3D modeling methods are not available, and NMFS continues to develop ways to quantitatively refine these tools, and will qualitatively address the output where appropriate. For stationary sources (such as pile driving), NMFS User Spreadsheet predicts the closest distance at which, if a marine mammal remained at that distance the whole duration of the activity, it would not incur PTS. Inputs used in the User Spreadsheet, and the resulting isopleths are reported below.

Table 4. User spreadsheet input parameters used for calculating harassment isopleths.

Parameter	Impact Pile Driving	Vibratory Pile Driving (Sheet Pile)	Vibratory Pile Removal (Timber Pile)
Spreadsheet Tab Used	E.1) Impact pile driving	A.1) Vibratory pile driving	A.1) Vibratory pile driving
Source Level	180 dB SEL	160 dB RMS	152 dB RMS
Weighting Factor Adjustment (kHz)	2	2.5	2.5
Number of strikes per pile	300	N/A	N/A
Number of piles per day	6	N/A	N/A

Activity Duration (hours) within 24-hour period	N/A	6	6
Propagation (xLogR)	15LogR	15LogR	15LogR
Distance of source level measurement (meters)	10	10	10

Table 5. Calculated distances to Level A harassment and Level B harassment isopleths during pile installation and removal.

Source	Level A Harassment Zone (meters)				Level B Harassment Zone (meters)
	Mid-frequency cetacean	High-frequency cetacean	Phocid pinniped	Otariid pinniped	
Impact pile driving	33	1111	499	36	1000
Vibratory pile driving (sheet pile)	2	29	12	1	4642
Vibratory pile removal (timber pile)	< 1	8	3	< 1	1359

While the calculated distances to the Level A and Level B harassment isopleths are up to 4,642 m, the project occurs within a nearly completely enclosed harbor, with only a narrow mouth leading out into the larger Monterey Bay. The harbor is approximately 152 m wide at the project site, and the furthest extent sound could travel in a straight line within the harbor is approximately 610 m (see Figures 2a and 2b in the IHA application). Depending on the pile location, sound may travel out the mouth of the harbor, but only in a small narrow band extending to the southeast (see Figure 3 in the IHA application). Therefore, while the calculated distances to thresholds are large, the actual ensonified area is significantly constrained by land.

Marine Mammal Occurrence

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations. Harbor seals and California sea lions are regular occupants of the harbor. Monitors from EcoSystems West conducted surveys of harbor docks in May and June 2018 to determine the number of pinnipeds expected to occur during the project. As stated previously, harbor seals are known to use the harbor docks and other structures for nighttime haulouts. Most surveys occurred at dawn to count the number of pinnipeds that may be present at the beginning of each day of construction. Additional daytime monitoring occurred in July and August 2018 during harbor maintenance activities. These daytime surveys included counts of pinnipeds hauled out and in the water. The maximum number of hauled out harbor seals was 23 while up to three seals were observed in the water during the day. Up to four California sea lions were observed using the harbor during the day. Harbor porpoises and bottlenose dolphins do not typically occur within the harbor, but may transit through the narrow band of ensonified area that extends to the southeast of the harbor entrance (see Figure 3 in the IHA application).

Take Calculation and Estimation

Here we describe how the information provided above is brought together to produce a quantitative take estimate.

Level B Harassment – Level B takes of harbor seals and California sea lions were estimated by multiplying the highest number of animals observed within the harbor (23 harbor seals and four California sea lions) by the days of activity (17 days). Level B harassment take of harbor porpoises and bottlenose dolphins was estimated using mean group size and the likelihood that a group of animals may enter the ensonified area during the project. Mean group size of harbor porpoises traveling through northern Monterey Bay was assumed to be 1.75

animals (Forney *et al.*, 2014) and we assume that a group of porpoises may pass through the ensonified band every other day during construction. Mean group size of bottlenose dolphins was assumed to be eight animals (Weller *et al.*, 2016) and we assume that a group of dolphins may pass through the ensonified band every other day during construction. In the **Federal Register** notice of proposed IHA (84 FR 13892; April 8, 2019), we used eight days to estimate the number of bottlenose dolphins and harbor porpoises that may be taken by Level B harassment. However, as noted by the Commission, if a group of bottlenose dolphins or harbor porpoises were to pass through the ensonified area on the first day of construction, and every other day after, the total number of days that these animals may be harassed would be nine days. Therefore, nine days is used here as the duration to estimate the number of bottlenose dolphins and harbor porpoises that may be taken.

Level A Harassment – In the **Federal Register** notice of proposed IHA (84 FR 13892; April 8, 2019), Level A harassment takes of harbor seals were estimated by multiplying the highest number of seals observed in the water during the day (three seals) by the number of days of impact pile driving (15 days). Level A harassment was only proposed to be authorized for harbor seals during impact pile driving, due to the relatively small Level A harassment isopleths for other species and other activities. However, during the public comment period, the Commission suggested that although only three harbor seals have been observed within the harbor during the day, because up to 23 harbor seals may utilize the harbor, Level A take of 23 harbor seals per day should be authorized. We agreed with the Commission's suggestion, and have increased the authorized takes by Level A harassment accordingly.

Additionally, in the **Federal Register** notice of proposed IHA (84 FR 13892; April 8, 2019), NMFS asserted that mitigation measures (see below) were expected to eliminate any

potential for Level A harassment of California sea lions within the harbor. During the public comment period, the Commission suggested that NMFS authorize one take by Level A harassment of California sea lion per day of impact pile driving, due to the prevalence of California sea lions within the harbor and the potential for animals to enter the relevant Level A harassment zone before a shutdown can be initiated. NMFS agreed and has authorized one take of California sea lion by Level A harassment per day of impact pile driving (15 days).

While the Level A harassment zone for harbor porpoises is greater than that of harbor seals, harbor porpoises are not expected to occur within the narrow band of sound that may exceed the harassment threshold for sufficient duration to experience Level A harassment (see Figures 1 and 3 in the IHA application). Take of harbor porpoises by Level A harassment was not requested and has not been authorized.

Table 6. Estimated take by Level A and Level B harassment, by species and stock, resulting from Port District project activities.

Species	Stock	Level B takes per day	Level A takes per day	Days of activity	Total Level B take	Total Level A take	Total authorized Take	Authorized take as percentage of stock
Harbor seal	California	23	23	17[a]	391	345	736	2.38%
California sea lion	U.S.	4	1	17	68	15	83	0.03%
Bottlenose dolphin	California Coastal	8	0	9[b]	72	0	72	15.9%
Harbor porpoise	Monterey Bay	2	0	9[b]	18	0	18	0.48%

[a] Days of activity for Level A take calculations is only 15 days of impact pile driving
[b] Harbor porpoises and bottlenose dolphins are expected to occur within the ensonified area every other day during construction activities

Mitigation

In order to issue an IHA under Section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned) the likelihood of effective implementation (probability implemented as planned); and

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Mitigation for Marine Mammals and their Habitat

In addition to the measures described later in this section, the Port District will employ the following standard mitigation measures:

- Conduct briefings between construction supervisors and crews and the marine mammal monitoring team prior to the start of all pile driving activity, and when new personnel join the work, to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures;
- For in-water heavy machinery work other than pile driving (*e.g.*, pre-drilling, etc.), if a marine mammal comes within 10 m, operations shall cease and equipment use reduced to minimum level required to maintain safe working conditions. This type of work could include the following activities: (1) pre-drilling; or (2) positioning of the pile on the substrate via a land-based crane;
- Work may only occur during daylight hours, when visual monitoring of marine mammals can be conducted;
- For those marine mammals for which Level B harassment take has not been requested, in-water pile installation/removal and drilling will shut down immediately if such species are observed within or on a path towards the monitoring zone (*i.e.*, Level B harassment zone); and
- If take reaches the authorized limit for an authorized species, pile installation will be stopped as these species approach the Level B harassment zone to avoid additional take.

The following measures are also included in the mitigation requirements:

Establishment of Shutdown Zone for Level A Harassment – For all pile driving and removal activities, the Port District must establish a shutdown zone. The purpose of a shutdown

zone is generally to define an area within which shutdown of an activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area).

During the public comment period, the Commission noted that the shutdown zones proposed in the **Federal Register** notice of proposed IHA (84 FR 13892; April 8, 2019) should be modified for certain activities to be more consistent with the activity-specific Level A harassment zones. Specifically, the Commission suggested that the shutdown zone for vibratory removal of timber piles should be decreased from 25 m to 10 m, the shutdown zone for vibratory installation of sheet piles should be reduced from 25 m to 15 for pinnipeds and increased from 25 m to 30 m for harbor porpoises, and the shutdown zone for impact driving of sheet piles should be 25 m for all pinnipeds. NMFS agrees with the Commission's suggestions, and has adjusted the shutdown zones accordingly (Table 7).

Harbor porpoises and bottlenose dolphins are not expected to occur within the harbor, so instead of a standard shutdown distance, the Port District will be required to shutdown impact pile driving activities if these species are observed entering the harbor (Table 7). A Protected Species Observer (PSO) will be stationed within the harbor such that they have a view of the immediate area around the pile driving as well as the areas north (toward the back of the harbor) and south (toward the harbor entrance) of the project site.

Establishment of Monitoring Zones for Level B Harassment – The calculated distances to the Level B harassment thresholds may exceed the distance within the harbor that sound may travel in a linear direction. The harbor is approximately 152 m wide at the project site, and the furthest extent sound could travel in a straight line within the harbor is approximately 610 m (see Figures 2a and 2b in the IHA application). Sound may transmit in a narrow band into Monterey Bay through the mouth of the harbor but the overall ensonified area is relatively small. As stated

above, a PSO will be stationed within the harbor. Rather than a set distance-based monitoring zone, the PSOs will monitor the entire observable harbor area (Table 7).

Table 7. Shutdown and monitoring zones by project activity.

Activity	**Shutdown Zone (m)**	**Monitoring Zone**
Vibratory removal of timber piles	All species: 10	Entire observable harbor area
Impact installation of steel sheet piles	Pinnipeds: 25 Harbor porpoise and bottlenose dolphin: at mouth of harbor	
Vibratory installation of steel sheet piles	Pinnipeds: 15 Harbor porpoise: 30	
All other in-water activities (*e.g.*, pre-drilling)	10	

Soft Start - The use of soft-start procedures are believed to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, contractors would be required to provide an initial set of strikes from the hammer at reduced energy, with each strike followed by a 30-second waiting period. This procedure would be conducted a total of three times before impact pile driving begins. Soft start would be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of thirty minutes or longer. Soft start is not required during vibratory pile driving and removal activities.

Pre-Activity Monitoring - Prior to the start of daily in-water construction activity, or whenever a break in pile driving/removal or drilling of 30 minutes or longer occurs, PSOs will observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone will be cleared when a marine mammal has not been observed within the zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft-start cannot proceed

until the animal has left the zone or has not been observed for 15 minutes. If the Level B harassment zone has been observed for 30 minutes and non-permitted species are not present within the zone, soft start procedures can commence and work can continue even if visibility becomes impaired within the Level B monitoring zone. When a marine mammal permitted for Level B harassment take is present in the Level B harassment zone, activities may begin and Level B harassment take will be recorded. As stated above, if the entire Level B harassment zone is not visible at the start of construction, piling or drilling activities can begin. If work ceases for more than 30 minutes, the pre-activity monitoring of both the Level B harassment and shutdown zone will commence.

Based on our evaluation of the applicant's measures, as well as other measures considered by NMFS, NMFS has determined that the mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an IHA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must set forth, "requirements pertaining to the monitoring and reporting of such taking." The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas);
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and
- Mitigation and monitoring effectiveness.

Marine Mammal Visual Monitoring

Monitoring shall be conducted by NMFS-approved observers. A trained observer shall be placed from the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. Observer training must be provided prior to project start, and shall include instruction on species identification (sufficient to distinguish the species in the project area), description and

categorization of observed behaviors and interpretation of behaviors that may be construed as being reactions to the specified activity, proper completion of data forms, and other basic components of biological monitoring, including tracking of observed animals or groups of animals such that repeat sound exposures may be attributed to individuals (to the extent possible).

Monitoring will be conducted 30 minutes before, during, and 30 minutes after pile driving/removal and drilling activities. In addition, observers shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions in concert with distance from piles being driven or removed. Pile driving/removal and drilling activities include the time to install or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than 30 minutes.

One PSO will be stationed at a location within the harbor that allows full monitoring of the area immediately around the piles being driven, as well as a view toward the back of the harbor and toward the harbor entrance. The PSO will scan the waters using binoculars, and/or spotting scopes if necessary, and would use a handheld GPS or range-finder device to verify the distance to each sighting from the project site. All PSOs would be trained in marine mammal identification and behaviors and are required to have no other project-related tasks while conducting monitoring. In addition, monitoring will be conducted by qualified observers, who will be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator. The Port District must adhere to the following observer qualifications:

(i) Independent observers (*i.e.*, not construction personnel) are required;

(ii) At least one observer must have prior experience working as an observer;

(iii) Other observers may substitute education (degree in biological science or related field) or training for experience;

(iv) Where a team of three or more observers are required, one observer shall be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer; and

(v) The Port District shall submit observer CVs for approval by NMFS.

Additional standard observer qualifications include:

- Ability to conduct field observations and collect data according to assigned protocols. Experience or training in the field identification of marine mammals, including the identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

A draft marine mammal monitoring report would be submitted to NMFS within 90 days after the completion of pile driving and removal and drilling activities. It will include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report must include:

- Date and time that monitored activity begins or ends;
- Construction activities occurring during each observation period;
- Weather parameters (*e.g.*, percent cover, visibility);
- Water conditions (*e.g.*, sea state, tide state);
- Species, numbers, and, if possible, sex and age class of marine mammals;
- Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
- Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
- Locations of all marine mammal observations; and
- Other human activity in the area.

If no comments are received from NMFS within 30 days, the draft final report will constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA (if issued), such as an injury, serious injury or mortality, The Port District would immediately cease the specified activities and report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator. The report would include the following information:

- Description of the incident;
- Environmental conditions (*e.g.*, Beaufort sea state, visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;

- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the Port District to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Port District would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that the Port District discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition as described in the next paragraph), the Port District would immediately report the incident to the Office of Protected Resources, NMFS, and the NMFS West Coast Stranding Hotline and/or by email to the West Coast Regional Stranding Coordinator. The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the Port District to determine whether modifications in the activities are appropriate.

In the event that the Port District discovers an injured or dead marine mammal and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the Port District would report the incident to the Office of Protected Resources, NMFS, and the NMFS West Coast Stranding Hotline and/or by email to the West Coast Regional Stranding Coordinator, within 24 hours of the discovery. The Port District

would provide photographs, video footage (if available), or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.*, intensity, duration), the context of any responses (*e.g.*, critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

Pile driving and removal activities associated with the seawall replacement project as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level A harassment and Level B harassment from underwater sounds generated from pile installation and removal. Potential takes

could occur if individuals of these species are present in the ensonified zone when these activities are underway.

The takes from Level A and Level B harassment would be due to potential behavioral disturbance, TTS, and PTS. No mortality is anticipated given the nature of the activity and measures designed to minimize the possibility of injury to marine mammals. Level A harassment is only anticipated for harbor seals. The potential for harassment is minimized through the construction method and implementation of the planned mitigation measures (see *Mitigation* section above).

Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from other similar activities, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.*, Thorson and Reyff 2006; HDR, Inc. 2012; Lerma 2014; ABR 2016). Most likely, individuals will simply move away from the sound source and be temporarily displaced from the areas of pile driving, although even this reaction has been observed primarily only in association with impact pile driving. The pile driving activities analyzed here are similar to, or less impactful than, numerous other construction activities conducted in northern California, which have taken place with no known long-term adverse consequences from behavioral harassment. Level B harassment will be reduced to the level of least practicable adverse impact through use of mitigation measures described herein and, if sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the area while the activity is occurring. While vibratory driving associated with the project may produce sound at distances of several kilometers from the project site through the mouth of the harbor, thus intruding on some habitat, the project site itself is located in a busy harbor and the majority of

sound fields produced by the specified activities are contained within the harbor. Therefore, we expect that animals annoyed by project sound would simply avoid the area and use more-preferred habitats.

In addition to the expected effects resulting from authorized Level B harassment, we anticipate that harbor seals may sustain some limited Level A harassment in the form of auditory injury. However, animals in these locations that experience PTS would likely only receive slight PTS, *i.e.* minor degradation of hearing capabilities within regions of hearing that align most completely with the energy produced by pile driving, *i.e.* the low-frequency region below 2 kHz, not severe hearing impairment or impairment in the regions of greatest hearing sensitivity. If hearing impairment occurs, it is most likely that the affected animal would lose a few decibels in its hearing sensitivity, which in most cases is not likely to meaningfully affect its ability to forage and communicate with conspecifics. As described above, we expect that marine mammals would be likely to move away from a sound source that represents an aversive stimulus, especially at levels that would be expected to result in PTS, given sufficient notice through use of soft start.

The project also is not expected to have significant adverse effects on affected marine mammals' habitat. The project activities would not modify existing marine mammal habitat for a significant amount of time. The activities may cause some fish to leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range; but, because of the short duration of the activities and the relatively small area of the habitat that may be affected, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences.

In summary and as described above, the following factors primarily support our determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- No mortality is anticipated or authorized;
- The Level A harassment exposures are anticipated to result only in slight PTS, within the lower frequencies associated with pile driving;
- The anticipated incidents of Level B harassment consist of, at worst, temporary modifications in behavior that would not result in fitness impacts to individuals;
- The specified activity and ensonified area is very small relative to the overall habitat ranges of all species and does not include habitat areas of special significance (BIAs or ESA-designated critical habitat); and
- The presumed efficacy of the mitigation measures in reducing the effects of the specified activity to the level of least practicable adverse impact.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the monitoring and mitigation measures, NMFS finds that the total marine mammal take from the Port District's activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under Sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate

estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

Table 6 presents the number of animals that could be exposed to received noise levels that could cause Level A and Level B harassment for the Port District's activities. Our analysis shows that less than 16 percent of each affected stock could be taken by harassment. The numbers of animals anticipated to be taken for these stocks would be considered small relative to the relevant stock's abundances even if each estimated taking occurred to a new individual – an unlikely scenario.

Based on the analysis contained herein of the Port District's activity (including the mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq*.) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our action (*i.e.*, the issuance of an incidental harassment authorization) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (incidental harassment authorizations with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has determined that the issuance of the IHA qualifies to be categorically excluded from further NEPA review.

Endangered Species Act (ESA)

No incidental take of ESA-listed species is authorized or expected to result from this activity. Therefore, NMFS has determined that formal consultation under section 7 of the ESA is not required for this action.

Authorization

NMFS has issued an IHA to the Port District for the incidental take of marine mammals due to in-water construction work associated with the Aldo's Seawall Replacement Project in Santa Cruz, CA from June 1, 2019 through May 31, 2020, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: May 14, 2019.

Donna S. Wieting,

Director, Office of Protected Resources,

National Marine Fisheries Service.

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